

NEW REPTILE RECORDS FROM RAINFORESTS OF SOUTH AND MIDEASTERN QUEENSLAND

J. A. COVACEVICH, P.J. COUPER AND G.J. INGRAM

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Recent surveys of 13 previously unsurveyed small rainforests of south and mideastern Queensland have refined knowledge of the distribution of many reptile species. *Nangura spinosa* gen. et sp. nov., *Lygisaurus zuma* sp. nov., *Phyllurus isis*, *P. nepthys* and *P. ossa* spp. nov. have been described largely as a result of this survey. □ *Survey, reptiles, rainforest, Queensland, Australia.*

J.A. Covacevich, P.J. Couper & G.J. Ingram, Queensland Museum, PO Box 3300, South Brisbane, Queensland 4101, Australia; 17 July, 1993.

Following a decade of fairly intense research, moist, near-coastal rainforest reptiles are now probably better known than those of other habitats in Queensland. Many new species have been described from Queensland's notophyll and mesophyll vine forests, and revisionary work on several rainforest genera has now been completed or is nearly so. Nowhere has the product of well-organized rainforest research been more evident than in the Wet Tropics, recently (1988) placed on the World Heritage Register. Since 1979, 13 of the 20 reptile species endemic to those rainforests have been described (Covacevich, in press). From recent descriptions and revisions, from reference collections (notably of the Queensland and Australian Museums), and from the earlier literature, it has been possible to review distributions of many rainforest species, at least to the extent of defining their north-south limits and commenting on aspects of their zoogeography and conservation (Covacevich & McDonald, 1991; Covacevich, in press).

Much is known as a result of collecting undertaken either randomly or in surveys in the large rainforests. Major surveys (e.g. Anonymous, 1976; Broadbent & Clark, 1976; Queensland Museum, 1977) have focussed on larger tracts of rainforest. In these studies mideastern Queensland rainforests have not generally received the same attention as those further north or south, so their reptile species are not so well known. In south and mideastern Queensland, there are many small, isolated rainforests about which nothing herpetological is known. Semicovergreen vine thickets, particularly, are poorly known and have been reduced by clearing for agriculture (Forster, et al., 1991).

In 1991, our proposal to the National Rainforest Conservation Programme to make small collections of reptiles in previously unsurveyed rainforests of south and mideastern Queensland was approved for funding. The object was to add to knowledge of the distribution of rainforest reptiles, particularly the less well-known species. Our study sites were selected from areas from which there were no museum records of reptiles. No attempt was made to ensure the sites were comparable in terms of size, soil type, aspect, season or survey time, because our interest in the reptile species was purely discovery. Replication was not considered necessary. Four-ten 'man' days were spent collecting reptile specimens at most sites, using conventional methods of rolling logs and rocks, and peeling bark and 'working' sun patches. Spotlighting was undertaken at all sites. At some very small rainforests (e.g. Warriwillah, a remnant of the now-cleared Isis Scrub) only one day was spent. In the species list (Table 1) the number of 'man' days spent at each is indicated in brackets. These records are not, and are not intended to be complete. Rather, they are a small contribution to knowledge of the distributions of some of the species of reptiles.

For most species, voucher specimens have been lodged in the Queensland Museum. A species name not accompanied by a 'J' number is based on sight record only, always by at least one of us. Collection sites are arranged north to south.

NEW INFORMATION

This work to improve the accuracy of distribution data for reptiles in south and mideastern Queensland has made returns beyond our expect-

TABLE 1. Some small, previously-unsurveyed rainforests of south and mideastern Queensland: reptile records from October, 1991 to April, 1993.

MT OSSA 20°56' 148°49', MEQ (6) notophyll vine forest: *Phyllurus osso* (J53443-7, J53507), *Oedura ocellata* (J53463), *Carlia rhomboidalis* (J53456-61), *Eulamprus omplus* (J53465, J53531-2), *E. tenuis* (J53466), *Lampropholis adonis* (J53452-4, J53462), *Saproscincus spectabilis* (J53508), *Physignathus lesueurii* (J53533), *Morelia spilota*, *Boiga irregularis*, *Dendrelaphis punctulata* (J53442), *Demonia psammophis* (J53440-1).

COFFEE CREEK, MT JUKES 21°00' 148°57', MEQ (10) notophyll vine forest: *Phyllurus isis* (J53485-6, J53518), *Anomalopus verreauxi* (J53600), *Carlia rhomboidalis* (J53562-4, J53576-81), *Eulamprus amplus* (J53523), *E. quoyii*, *Lampropholis adonis* (J53565, J53570-5, J53608-10), *Saproscincus spectabilis* (J53566-7, J53582-4, J53611-2), *Physignathus lesueurii* (J53595), *Morelia spilota* (J53593), *Dendrelaphis punctulata* (J53515), *Cacophis squamulosus* (J53516), *Demonia psammophis* (J53487, J53585).

ST HELEN'S GAP, VIA MT CHARLTON 21°00' 148°43', MEQ (3) notophyll vine forest: *Phyllurus ossa* (J53426-8), *Carlia rhomboidalis* (J53429-31), *Eulamprus amplus* (J53471-2), *E. tenuis* (J53473), *Lampropholis adonis* (J53432-4), *Saproscincus spectabilis* (J53435-9), *Varanus varius*, *Boiga irregularis* (J53425).

MT CHARLTON (foothills) 21°01' 148°44', MEQ (9) notophyll vine forest: *Oedura cf. tryoni* (J53412), *Phyllurus osso* (J53389-90, J53414), *Carlia rhomboidalis* (J53402-7, J53415), *Eulamprus amplus* (J53399-400, J53828-30), *E. tenuis* (J53401, J53416) *Lampropholis adonis* (J53410-11, J53417-21), *Saproscincus spectabilis* (J53408-9, J53422-4) *Varanus varius*, *Morelia spilota*, *Demonia psammophis*.

MT BLACKWOOD NATIONAL PARK 21°02' 148°56', MEQ (9) notophyll vine forest: *Oedura ocellata* (J53479), *Phyllurus isis* (J53480, J53511-2, J53591, J53602-3), *Carlia rhomboidalis* (J53474-5, J53514, J53559-60), *Eulamprus amplus* (J53485, J53513), *Lampropholis adonis* (J53476-8, J53483, J53558), *Saproscincus spectabilis* (J53481), *Morelia spilota* (J53606), *Boiga irregularis* (J53510, J53522), *Cacophis harriettiae* (J53526), *Rhinoplocephalus nigrescens* (J53607).

ROCKY DAM CREEK via Crediton Site 1 21°18' 148°32', MEQ (4) notophyll vine forest: *Oedura ocellata* (J53333), *Phyllurus nephys* (J53330-2), *Eulamprus tenuis* (J53334-5), *Lampropholis adonis* (J53336-50) *Voronius vorius*. Site 2 21°19' 148°34' (3) notophyll vine forest: *Phyllurus nephys* (J53359-62), *Carlia rhomboidalis* (J53352-4, J53363-6), *Eulamprus amplus* (J53358, J533827), *E. tenuis* (J53356-7), *Lampropholis adonis* (J53355, J53367-78), *Saproscincus spectabilis*, *Physignathus lesueurii*, *Varanus varius*, *Dendrelaphis punctulata* (J53351).

EAST FUNNEL CREEK 21°36' 149°12', MEQ (8) notophyll vine forest: *Carlia rhomboidalis* (J53489-91, J53496, J53501-2), *Eulamprus quoyii* (J53534), *Lampropholis adonis* (J53492-3, J53498, J53500, J53503-6, J53613), *Saproscincus spectabilis* (J53497, J53601, J53614), *Physignathus lesueurii* (J53494), *Morelia spilota* (J53319), *Boiga irregularis* (J53509), *Demonia psammophis* (J53524).

WEST HILL CREEK headwaters, Connors Range 22°51' 149°18', MEQ (2) notophyll vine forest: *Carlia rhomboidalis* (J53537-8), *Lampropholis adonis* (J53539-50), *Boiga irregularis* (J53530).

KA KA MUNDI/SCRUBBY CREEK 24°50' 147°25', SCQ (6) semievergreen vine thicket: *Gehyra catenata*, *Lialis burtonis*, *Anomalopus brevicolis* (J56037-41), *A. leuckartii* (J56042-3, J56061), *Carlia pectoralis* (J56035, J56046), *Cryptoblepharus virgatus* (J56034), *Ctenotus taeniolatus* (J56044, J56062) *Eulamprus martini* (J56065-6, J56083-4), *Lerista fragilis* (J56063), *L. punctatovittata* (J56090), *Gemmatophora nobbi* (J56060), *Morelia maculosa* (J56071), *Dendrelaphis punctulata*, *Rhinoplocephalus nigrescens* (J56052).

KA KA MUNDI, PACKSADDLE SPRING 24°50' 147°27', SCQ (1) semievergreen vine thicket: *Gelytro cotenata* (J56057), *G. dubia* (J56058-9), *Anomalopus leuckartii* (J56055), *Lerista fragilis* (J56056).

WARRIWILLAH, via Cordalba 25°06' 152°13', SEQ (1) notophyll vine forest (riverine): *Calypotis scutirostrum* (J57242-3), *Lygisaurus foliorum* (J57244), *Ophiocercus cooloolensis* (J57240-1) *Physignathus lesueurii*, *Boiga irregularis*, *Tropidonophis mairii*.

NANGUR STATE FOREST 26°07' 151°58', SEQ (9) semievergreen vine thicket: *Anomalopus verreauxi* (J55996), *Calypotis scutirostrum* (J56001-8) *Carlia vivax* (J56009), *Ctenotus orcanus* (J56024), *Lampropholis omicula* (J57245), *Nonguro spinosa* (J56029, J56031, J57246, J57247), *Morethio taeniopleura* (J56028), *Soiophis equalis* (J55997-600, J56027, J56030), *Gemmatophora nobbi* (J56025), *Varanus varius*, *Dendrelaphis punctulata*, *Rhinoplocephalus nigrescens* (J56026).

MISTAKE MOUNTAINS 27°55' 152°20', SEQ (2) notophyll vine forest: *Coutula zio* (J31320), *Coeranoscincus reticulatus* (J54646-50), *Lampropholis delicata* (J54436), *Saproscincus challengerii* (J32276-7), *Physignathus lesueurii* (J54438), *Morelia spilota* (J54437), *Hemiaspis signata* (J54439), *Tropidechis carinatus* (J54434).

tations. New species have been collected; new data published on *Coeranoscincus reticulatus* and *Morelia spilota*; and the range of *Eulamprus amplus* has been extended. Most significant was the discovery of *Nangupa spinosa*, a distinct spiny lygosomid, by Cameron James and Mark Fletcher in Nangur State Forest, a remnant patch of semievergreen vine thicket (Covacevich et al., 1993). Most of the type specimens of *Lygisaurus zuma* Couper, 1993 were collected at Boulder

Creek, near Mt Charlton, MEQ, in open forest during this survey; *Phyllurus isis* and *P. ossa* Couper et al., 1993 were described from specimens discovered in this survey, and *P. nephys* Couper et al., 1993 has been described following re-examination of existing material and of new specimens found on this survey.

Coeranoscincus reticulatus is a rare skink (McDonald et al., 1991) occurring narrowly in southeastern Queensland and northeastern New

South Wales rainforest. As a result of work on the Mistake Mountains, Couper et al. (1992) have described the nest, eggs and young of this species.

Morelia spilota is a well-known predator of mammals and birds. In October, 1991 at East Funnel Creek, 21°37', 149°12', near Sarina MEQ, Covacevich & Couper (1992) found a large male *M. spilota* dead, following ingestion of a large specimen of the Cane Toad, *Bufo marinus*. *M. spilota* does not prey upon *B. marinus* under normal conditions. This discovery confirms previous anecdotal accounts.

Eulamprus amplus was described (Covacevich & McDonald, 1980) from two populations - Eungella and Conway National Parks, via Mackay and Proserpine, MEQ. It has been rated as 'rare' (McDonald et al., 1991). It is now known to occur in several intervening areas of rainforest, although its conservation status remains unchanged by the new records.

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LITERATURE CITED

- ANONYMOUS, 1976. 'Fauna of eastern Australian rainforest: preliminary report on sites surveyed by the Queensland Museum in mid-eastern and northeastern Queensland'. (Queensland Museum: Brisbane). 78pp.
- BROADBENT, J. & CLARK, S. 1976. 'A faunal survey of east Australian rainforests: Interim Report'. (Australian Museum: Sydney). 132pp.
- COUPER, P.J. 1993. A new species of *Lygisaurus* de Vis (Reptilia: Scincidae) from mideastern Queensland. *Memoirs of the Queensland Museum* 33: 162-166.
- COUPER, P.J., WHITTIER, J., MASON, R.T. & INGRAM, G.J. 1992. A nesting record for *Coeranoscincus reticulatus*. *Memoirs of the Queensland Museum* 32: 60.
- COVACEVICH, J. (in press). Rainforest reptiles of Australia's World Heritage Wet Tropics: zoogeography and conservation issues. *Journal of the International Herpetological Symposium*.
- COVACEVICH, J.A. & COUPER, P.J. 1992. The Carpet Python, *Morelia spilota* (Lacépède), another unsuccessful predator of the Cane Toad *Bufo marinus* (Linnaeus), in Australia. *Contributions in Herpetology, Greater Cincinnati Herpetological Society*: 57-9.
- COVACEVICH, J. & McDONALD, K.R. 1980. Two new species of skinks from mid-eastern Queensland rainforest. *Memoirs of the Queensland Museum* 20: 95-101.
- COVACEVICH, J. & McDONALD, K.R. 1991. Frogs and reptiles of tropical and subtropical eastern Australian rainforests: distribution patterns and conservation. Pp.281-309. In Werren, G. & Kershaw P. (eds), 'The rainforest legacy, Australian National Rainforests Study, Volume 2 - flora and fauna of the rainforests'. Australian Heritage Commission Special Australian Heritage Publication Series Number 7(2). (Australian Government Publishing Service: Canberra). 414pp.
- COVACEVICH, J.A., COUPER, P.J. & JAMES, C. 1993. A new skink, *Nangura spinosa* gen. et sp. nov., from a dry rainforest of southeastern Queensland. *Memoirs of the Queensland Museum* 34(1): 159-167.
- FORSTER, P.I., BOSTOCK, P.D., BIRD, L.H. & BEAN, A.R. 1991. 'Vineforest plant atlas for south-east Queensland. An assessment of conservation status'. (Queensland Government, Queensland Herbarium: Brisbane). 478pp.
- McDONALD, K.R., COVACEVICH, J.A., INGRAM, G.J. & COUPER, P.J. 1991. The status of frogs and reptiles. Pp.338-345. In Ingram, G.J. & Raven, R.J. (eds), 'An atlas of Queensland's frogs, reptiles, birds and mammals'. (Board of Trustees, Queensland Museum: Brisbane). 391pp.
- QUEENSLAND MUSEUM, 1977. 'Fauna of eastern Australian rainforests II. Preliminary report on sites surveyed by the Queensland Museum in southeastern and far northeastern Queensland, with additional results from sites surveyed previously in northeastern Queensland'. (Queensland Museum: Brisbane). 102pp.